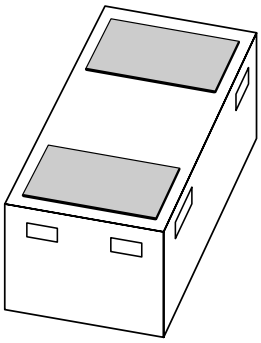
查询1PS10SB62供应商



# DATA SHEET



# 1PS10SB62
## Schottky barrier diode

Product specification

2003 May 15

Philips
Semiconductors

PHILIPS

# Schottky barrier diode 1PS10SB62

## FEATURES

- Ultra high switching speed
- Very low capacitance
- High breakdown voltage
- Leadless ultra small plastic package (1 mm × 0.6 mm × 0.5 mm)
- Boardspace 1.17 $mm^2$ (approx. 10% of SOT23)
- Power dissipation comparable to SOT23.

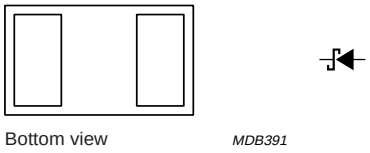
## APPLICATIONS

- Ultra high-speed switching
- High frequency applications
- Mobile communication, digital (still) cameras, PDAs and PCMCIA cards.

## DESCRIPTION

An epitaxial Schottky barrier diode encapsulated in a SOD882 leadless ultra small plastic package.

ESD sensitive device, observe handling precautions.




**Marking code:** S1.
The marking bar indicates the cathode.

Fig.1 Simplified outline (SOD882) and symbol.

## LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 60134).

| SYMBOL | PARAMETER | MIN. | MAX. | UNIT |
|---|---|---|---|---|
| $V_R$ | continuous reverse voltage | – | 40 | V |
| $I_F$ | continuous forward current | – | 20 | mA |
| $T_{stg}$ | storage temperature | −65 | +150 | °C |
| $T_j$ | junction temperature | – | 150 | °C |

## ELECTRICAL CHARACTERISTICS

$T_{amb}$ = 25 °C unless otherwise specified.

| SYMBOL | PARAMETER | CONDITIONS | MAX. | UNIT |
|---|---|---|---|---|
| $V_F$ | forward voltage | $I_F$ = 2 mA; see Fig.2; note 1 | 800 | mV |
| $I_R$ | reverse current | $V_R$ = 40 V; see Fig.3; note 1 | 1 | μA |
| $C_d$ | diode capacitance | $V_R$ = 0 V; f = 1 MHz; see Fig.4 | 0.6 | pF |

**Note**

1. Pulse test: pulse width = 300 μs; δ = 0.02.

## THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|---|---|---|---|---|
| $R_{th\ j\text{-}a}$ | thermal resistance from junction to ambient | note 1 | 500 | K/W |

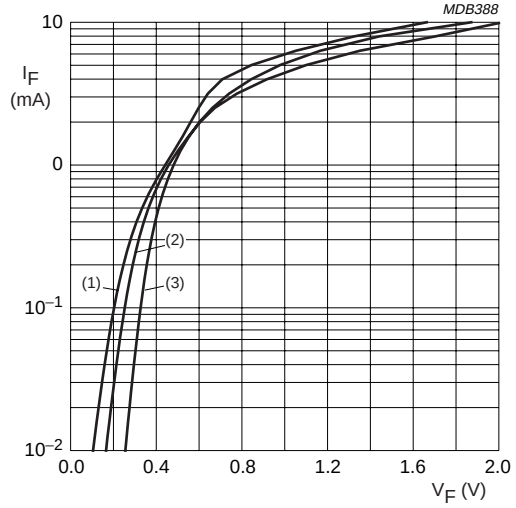
**Note**

1. Refer to SOD882 standard mounting conditions (footprint), FR4 with 60 μm copper strip line.

### Soldering

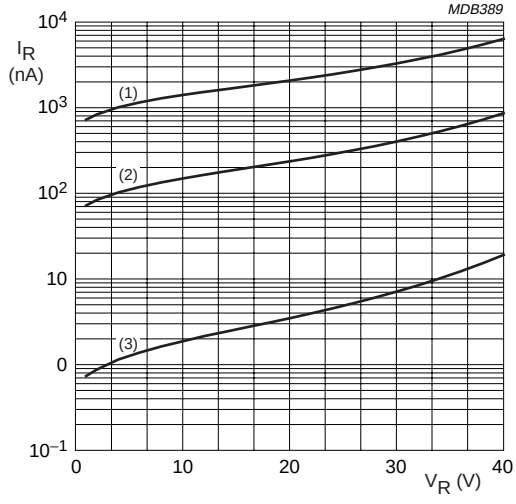
Reflow soldering is the only recommended soldering method.

## GRAPHICAL DATA



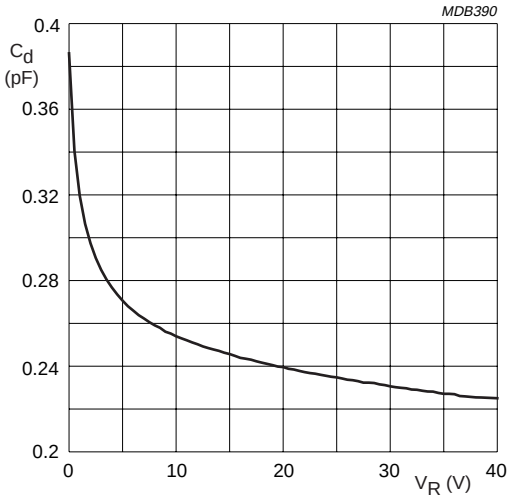

(1) $T_{amb}$ = 125 °C.
(2) $T_{amb}$ = 85 °C.
(3) $T_{amb}$ = 25 °C.

Fig.2 Forward current as a function of forward voltage; typical values.




(1) $T_{amb}$ = 125 °C.
(2) $T_{amb}$ = 85 °C.
(3) $T_{amb}$ = 25 °C.

Fig.3 Reverse current as a function of reverse voltage; typical values.

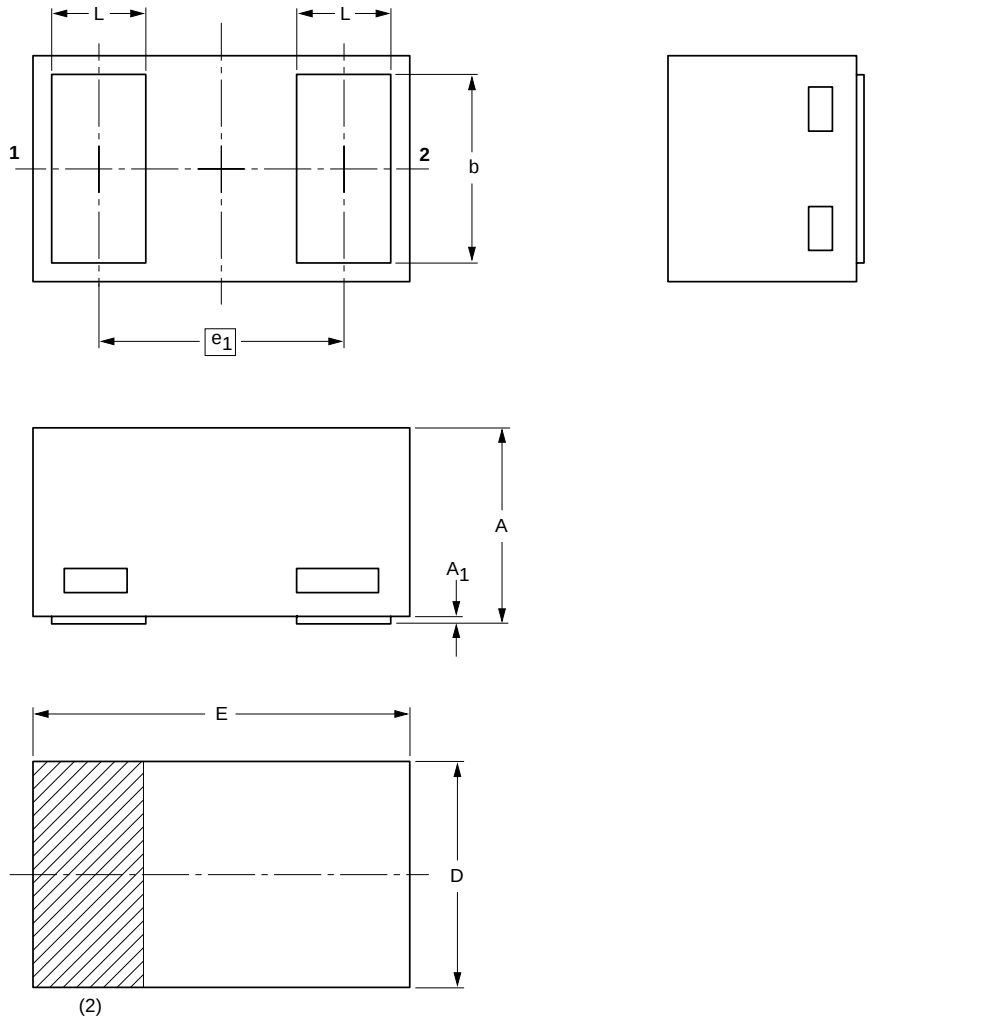



f = 1 MHz; $T_{amb}$ = 25 °C.

Fig.4 Diode capacitance as a function of reverse voltage; typical values.

## PACKAGE OUTLINE

**Leadless ultra small plastic package; 2 terminals; body 1.0 x 0.6 x 0.5 mm** **SOD882**




**DIMENSIONS (mm are the original dimensions)**

| UNIT | A(1) | A1 max. | b | D | E | e1 | L |
|---|---|---|---|---|---|---|---|
| mm | 0.50<br>0.46 | 0.03 | 0.55<br>0.47 | 0.62<br>0.55 | 1.02<br>0.95 | 0.65 | 0.30<br>0.22 |

**Notes**

1. Including plating thickness
2. The marking bar indicates the cathode

| OUTLINE VERSION | REFERENCES | | | | EUROPEAN PROJECTION | ISSUE DATE |
|---|---|---|---|---|---|---|
| | IEC | JEDEC | JEITA | | | |
| SOD882 | | | | | | ~~03-04-16~~<br>03-04-17 |

**DATA SHEET STATUS**

| LEVEL | DATA SHEET STATUS(1) | PRODUCT STATUS(2)(3) | DEFINITION |
|---|---|---|---|
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**Limiting values definition** — Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 60134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics sections of the specification is not implied. Exposure to limiting values for extended periods may affect device reliability.

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